REMARKS

Claims 1-28 stand rejected. Claims 1, 10, 13, 15, 16, 20, 23 and 26 are presently amended. New claim 29 is added. Applicants submit that no new matter has been added, and that the claim amendments are fully supported by the originally filed specification.

The abstract stands objected to for repeating information given in the title. Without acquiescing, Applicants submit that the new abstract provided in the present amendment renders the objection moot. Reconsideration and withdrawal of the objection is requested.

Claims 1-7, 13-16, 20, 21, 23, 24, 26 and 27 stand rejected under 35 USC 102(e) as being anticipated by US 2004/0178997 A1 (Gillespie). Applicants disagree.

Applicants claim systems and methods of calibrating a touch screen that determines touch position using ratios of currents flowing to a plurality of terminals connected to a resistive surface. Signals are applied to the touch screen through the terminals so that when a touch input is applied, current flows to each of the terminals that can be measured to determine the touch position. Examples of touch screens that use this method of determining touch position are analog capacitive and analog resistive.

Applicants' claims also recite that a calibration impedance can be applied to the touch screen, for example through the plurality of terminals, and that the applied calibration impedance can be measured as a "touch" at a known location. By comparing the measured location of the "touch" simulated by the calibration impedance to the expected location, error values can be obtained that can be applied to values measured for actual touches to achieve a more accurate touch location determination.

Gillespie discloses a capacitive touch sensor that includes a matrix of X and Y conductors. Touch position is determined by monitoring the capacitance profiles of the various individual X and Y conductors, thereby determining which X conductor and which Y conductor are closest to the touch position. This directly gives the X and Y coordinates. The conductors can be monitored over time to detect changes in capacitance that can be compensated. In addition to determining X and Y touch positions, the devices disclosed by Gillespie can determine finger pressure by summing the capacitances measured on the individual conductors.

In large part, the calibration algorithm disclosed by Gillespie compensates for changes in capacitance to help ensure more accurate finger pressure information.

Gillespie does not disclose a touch screen that determines touch position using ratios of currents flowing to a plurality of terminals. Nor does Gillespie disclose applying an impedance to such a touch screen for the purpose of determining error values that can be used to correct touch position determinations. As described, the device disclosed by Gillespie is a matrix touch sensor that determines the absolute X and Y coordinates of a touch based on determining which X and Y conductors are closest to the touch position. While Gillespie discloses a calibration algorithm and the ability to monitor for changes over time, Gillespie does not disclose the calibration methods or devices claimed by Applicants.

For at least these reasons, Gillespie cannot be said to anticipate Applicants' claims. Reconsideration and withdrawal of the 102(e) rejection over Gillespie is requested.

Claims 8-12, 17-19, 22, 25 and 28 stand rejected under 35 USC 103(a) as being unpatentable over Gillespie in view of U.S. Pat. No. 5,053,757 (Meadows).

Meadows discloses an analog capacitive touch panel system that employs automatic noise filtering that can be increased or decreased based on the amount of movement of the touch. Meadows discloses that this adaptive filtering minimizes the effects of noise on touch location determination. Because the devices of Gillespie and Meadows function differently based on different constructions (matrix versus analog capacitive), the signal methods disclosed by one are not directly applicable to the other. Therefore, there is no motivation to combine, nor expectation of success in making such a combination.

Meadows does not teach or suggest calibration systems and methods that include applying a calibration impedance to a touch screen and developing error values based on the applied calibration impedance. As such, Meadows does not cure the deficiencies of the Gillespie document. Therefore, even if Meadows and Gillespie could be fairly combined, the combination would not result in Applicants' claimed invention.

For at least these reasons, Applicants request reconsideration and withdrawal of the over Gillespie in view of Meadows.

Applicants submit that the claims are in condition for allowance, and earnestly solicit early indication of the same.

Respectfully submitted,

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